A new species of *Ceratoxanthis* Razowski, and distribution records for two species of *Aethes* Billberg from the Balkan Peninsula (Tortricidae: Cochylini)

Gustav Elsner* & Josef Jaroš**

* Hůlkova 304, CZ-197 00 Praha 9 – Kbely, Czech Republic; e-mail: gustav.elsner@volny.cz
** Institute of Entomology, Czech Academy of Sciences, Branišovská 31, CZ-370 05 České Budějovice, Czech Republic; e-mail: jaros@entu.cas.cz

Summary. *Ceratoxanthis adriatica* sp. n., a new species of Cochylini (Lepidoptera, Tortricidae) is described from southern Yugoslavia (Montenegro). A key to all known species of the genus *Ceratoxanthis* Razowski 1960, based on the male genitalia, is provided. *Aethes caucasica* (Amsel, 1959) is recorded from Bulgaria for the first time. *Aethes margaritifera* Falkovitsh, 1963 is recorded from Bulgaria and from the Balkan Peninsula for the first time.

Key words. Tortricidae, Cochylini, *Ceratoxanthis adriatica* sp. n., *Aethes*, new records, Yugoslavia, Montenegro, Bulgaria.

Introduction

The Cochylini of the Balkan Peninsula have been comparatively well documented in the last revision devoted to Cochylini of the Palaearctic Region (Razowski 1970). The most comprehensive publication dealing with Cochylini of this Peninsula was devoted to species of Bulgaria (Slivov 1973).

This paper presents the description of *Ceratoxanthis adriatica* sp. n. from Yugoslavia (Montenegro) and two new distribution records of Cochylini from Bulgaria, which are interesting from the zoogeographical point of view.

Ceratoxanthis adriatica sp. n.

Material examined. Holotype ♂: "Yugoslavia mer., Buljarica, 13.7.1985, G. Elsner lgt." Deposited in the collection of the National Museum Praha (NMPC).

Description. Adult (Fig. 1). Wingspan 20 mm. Antenna brown. Labial palpus approximately twice as long as the diameter of the eye, pale yellow with a brownish hue. Frons and vertex concolorous with palpus. Thorax and tegula pale yellow. Forewing ground colour pale yellow; basal half of costa edged with ferruginous-brown; markings consist of dark ferruginous-brown metallic erect scales; basal and sub-basal fasciae obsolete; median fascia represented by conspicuous elongate subdorsal patch; a conspicuous streak from above tornus inward-oblique to middle, inflexed outwards, terminating on upper margin of cell; cilia pale yellow with brown admixture, more strongly suffused with brown on tornus, with a weak ferruginous sub-basal line. Hindwing pale greyish-brown, cilia whitish yellow with pale brown sub-basal line.
Male genitalia (Figs 2, 3). Tegumen short and broad. Socius moderately sclerotised, sub-triangular, with the ventral margin slightly emarginated. Transtilla strongly sclerotised, broad and convex, without spines. Valva very broad; process situ-

Fig. 1. *Ceratoxanthis adriatica* sp. n., ♂, holotype.

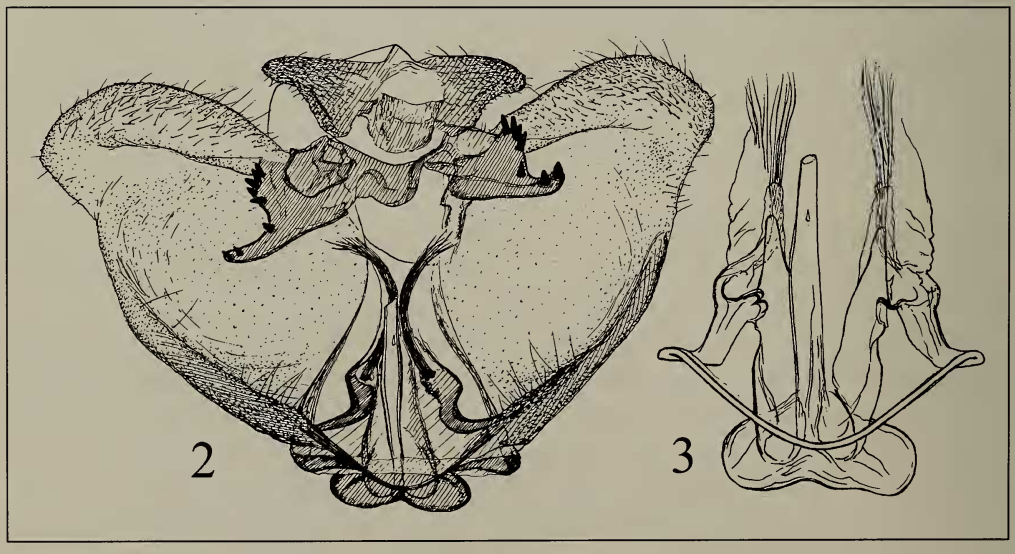

Fig. 2. Male genitalia of *Ceratoxanthis adriatica* sp. n., holotype, ventral view. **Fig. 3.** *Ceratoxanthis adriatica* sp. n., a caudal view at the aedeagus-juxta complex in detail (natural position).

ated below base of costa of the valva broad basally with strong, hook-like termination, armed with strong spines. Caulis large, extending laterally along aedeagus. Lateral processes of juxta, connected with caulis and base of sacculus, relatively short with a

cluster of ca. 15 long hairs distally. Aedeagus long and narrow with extremely broad bilobate coecum penis, one minute cornutus present.

Female genitalia. Unknown.

Biology. Unknown. The holotype was collected at UV light (fluorescent tube 320–480 nm), in 'steppe' habitat on dry slopes near the Adriatic Sea at an altitude of 500 m.

Distribution. Known only from the type locality: SW Yugoslavia – Montenegro.

Etymology. The new species is named after the position of the type locality on Adriatic coast.

Differential diagnosis. The genus *Ceratoxanthis* Razowski, 1960 is related and externally similar to the genera *Agapeta* Hübner, 1822 and *Fulvoclysia* Obraztsov, 1943, but may be safely distinguished from both, by its male genitalia (cf. Razowski 1968, 1987). *C. adriatica* is externally similar to some forms of *Agapeta hamana* (Linnaeus, 1758) with reduced markings in the costal area, but differs conspicuously by an elongate subdorsal patch, which in *A. hamana* is usually oval. The most closely related species *C. externana* (Eversmann, 1844) differs from *C. adriatica* by its nearly complete transverse fascia extended from costa to tornus and oval subdorsal spot. *C. externana* differs from *C. adriatica* also by its smaller size. Due to the remarkable differences in the male genitalia, *C. adriatica* may be safely distinguished from all four previously known *Ceratoxanthis* species. *C. adriatica* seems to be most closely related to *C. externana* (figured in Razowski 1968: 79, fig. 2, 1970: pl. 65, fig. 142, 1987: 225, figs 115–119) by the shape of the transtilla and moderately short lateral process of the juxta which considerably differ from those of *C. argentomixtana* (Staudinger, 1870), *C. iberica* Baixeras, 1992 and *Ceratoxanthis rakosyella* Wieser & Huemer, [2000]. The more typical features of the male genitalia of *C. adriatica* are the cluster of long hairs on the distal part of the lateral process of the juxta and extremely broad coecum penis. *C. adriatica* also differs considerably from *C. externana* by the shape of the process situated below the base of the costa of the valva. In *C. adriatica* this process has a relatively long and narrow hook-like termination and is armed with strong and very short spines, while in *C. externana* this process is more or less ovate and is armed with considerably narrower and longer spines.

A key to species of the genus *Ceratoxanthis* based on the male genitalia:

1 Lateral process of juxta approximately equally long as aedeagus 2

- Lateral process of juxta conspicuously longer than aedeagus 3

2 Lateral process of juxta provided with a row of spines terminally, aedeagus with coecum penis moderately broad ..... *externana*

- Lateral process of juxta provided with a cluster of long hairs terminally, aedeagus with coecum penis extremely broad ..... *adriatica*

3 Lateral process of juxta more than twice as long as aedeagus ..... *rakosyella*

- Lateral process of juxta approximately 1.5 times longer than aedeagus 4

4 Lateral process of juxta provided with a long row of spines extended from basal to terminal part ..... *argentomixtana*

- Lateral process of juxta provided with a row of spines on terminal part only ..... *iberica*

C o m m e n t s . The new species is known only from the holotype. There are 5 species of *Ceratoxanthis* known to date. The distribution of the genus *Ceratoxanthis* comprises a few isolated localities reaching from SW Europe to Asia Minor and Central Asia. Until recent years only two species of this genus were known (Razowski 1970): *C. externana* which is distributed from south-eastern part of European Russia to central Kazakhstan and Azerbaijan and *C. argentomixtana* which is distributed from south-eastern part of European Russia to West Kazakhstan and North Syria. Surprisingly, *C. iberica* was recently described from Spain (Baixeras, 1992), now a further new species *Ceratoxanthis rakosyella* has been described from Romania (Wieser & Huemer, [2000]). The fifth species, *C. adriatica* is known only from one locality on the Yugoslavian Adriatic coast. Although *C. externana* and *C. argentomixtana* are distributed over a relatively large area, the other three species of the genus *Ceratoxanthis* are known only from three isolated western localities. The biology of the representatives of the genus *Ceratoxanthis* remains poorly known. The immature stages and larval host plants are unknown. The adults occasionally come to light. *C. externana* is the only species whose female is known (Razowski, 1968, 1970).

***Aethes caucasica* (Amsel, 1959)**

Material examined. 2♂, Bulgaria mer., Kresna, 13.v.1975, K. Černý lgt., G. Elsner coll.

C o m m e n t s . *A. caucasica* is known from the Caucasus (Georgia: Tbilisi), southern Ural Region (Orenburg), northern Italy (Trentino) (Razowski 1970) and central Romania (Transylvania) (Kovácz & Kovácz 1996). Kovácz & Kovácz (1996) described the female genitalia for the first time. The species is associated with 'pseudo-steppe' habitats on dry slopes at lower elevations up to 400 m. Bulgarian specimens were collected in typical warm and dry sub-mediterranean habitat of Kresna Gorge of the Struma River valley (SW Bulgaria). This is the first record from Bulgaria.

***Aethes margaritifera* Falkovitsh, 1963**

Material examined. ♀, Bulgaria mer., Kresna, 31.v.1984, J. Jaroš lgt. et coll.

C o m m e n t s . *A. margaritifera* is known from the south-eastern part of European Russia (Uralsk, Krasnoarmiejsk, Orenburg), Central Asia and Armenia (Razowski 1970) and has been recorded also from NE Turkey (F. Groenen, pers. comm. and identification of his specimens by J. Jaroš). *A. margaritifera* is externally similar to *A. margaritana* (Haworth, [1811]) but differs from it by a slender subterminal deep ochreous streak extending to termen in contrast to *A. margaritana* which has a continuous or interrupted area of clear silver-white ground colour between the subterminal streak and termen. These two species may be easily separated on genitalia characters (see Razowski 1970). The Bulgarian specimen was collected in the warm and dry sub-mediterranean habitat of Kresna Gorge of the Struma River valley (SW Bulgaria), where *A. margaritifera* reaches the most north-western part of its range. This is the first record from Bulgaria and the Balkan Peninsula.

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